Electronic Supplementary Information

In situ dispersion of nonaqueous Fe$_3$O$_4$ nanocolloids by microdroplet coalescence and their use in the preparation of magnetic composite particles

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Table S1 Polydispersity indexes of the microdroplets at different conditions.

<table>
<thead>
<tr>
<th>Group</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Droplet size (μm)</td>
<td>102</td>
<td>197</td>
<td>294</td>
<td>395</td>
<td>505</td>
<td>604</td>
<td>695</td>
<td>791</td>
</tr>
<tr>
<td>Polydispersity index</td>
<td>0.042</td>
<td>0.042</td>
<td>0.039</td>
<td>0.041</td>
<td>0.044</td>
<td>0.043</td>
<td>0.047</td>
<td>0.048</td>
</tr>
</tbody>
</table>

The polydispersity index (PDI) is calculated based on the initial droplet size:

\[
PDI = \frac{1}{D_d} \sqrt{\frac{1}{n} \sum (d_a - D_d)^2} \times 100\%
\]

where \( D_d = \frac{1}{n} \sum d_a, 50 \leq n \leq 100 \).